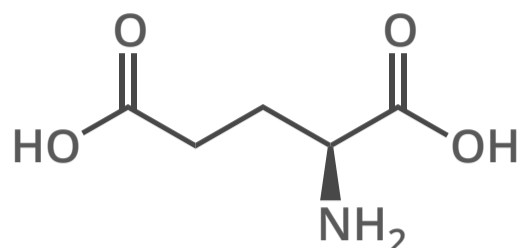


UNDESERVED REPUTATION?

MSG

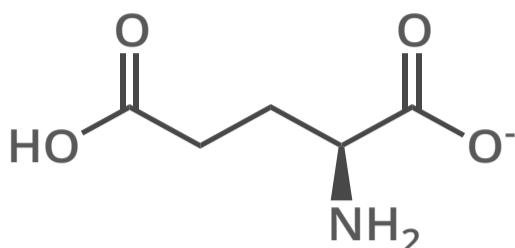
"CHINESE RESTAURANT SYNDROME"

The claim that MSG ingestion at dietary levels can cause headaches, nausea, heart palpitations, sweating, chest pains, and flushing. Originally it was linked to MSG in Chinese food.



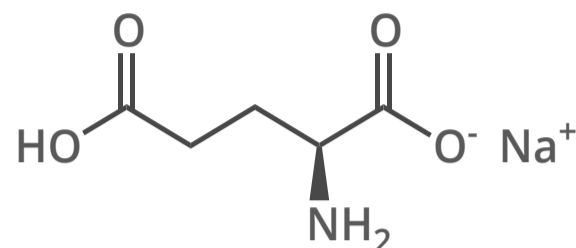
GLUTAMIC ACID

Naturally occurring amino acid



GLUTAMATE

Deprotonated form of glutamic acid



MONOSODIUM GLUTAMATE (MSG)

Sodium salt of glutamic acid

There is **NO CHEMICAL DIFFERENCE** between naturally occurring glutamate ions and the glutamate ions present in MSG. They're both treated exactly the same by our bodies.

GLUTAMATE GIVES FOODS AN 'UMAMI' FLAVOUR. FOODS WHICH NATURALLY CONTAIN FREE GLUTAMATE INCLUDE:



TOMATOES

140mg in 100g



PARMESAN

1200mg in 100g



MUSHROOMS

180mg in 100g



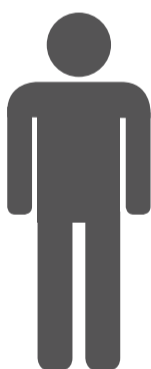
SOY SAUCE

~1000mg in 100g



POTATOES

102mg in 100g



**0.55 GRAMS
PER DAY**

Amount of MSG ingested by the average consumer in the USA.

**3 GRAMS
AT ONCE**

Amount of MSG, without food, needed to observe mild symptoms in a small number of people.

DAILY, WE INGEST
20-40 TIMES MORE
NATURALLY OCCURRING GLUTAMATE
THAN WE DO MSG



SCIENTIFIC EVIDENCE

Double blinded studies haven't found any links to supposed symptoms at normal dietary levels of MSG.



NEUROTOXICITY?

Tests that suggested neurotoxicity in mice used extremely high doses, and primate results weren't replicable.



FLAWED METHODS?

Relevance of studies looking at ingestion of MSG in isolation are questionable; we always consume it with food.



ANECDOTAL?

Many criticisms of MSG contain anecdotal accounts, without scientific evidence to back them up.



INJECTION VS. ORAL

Studies that look at the effects of injected MSG may have less relevance, as normally we ingest it orally.

DECADES OF RESEARCH HAVE CONCLUDED:

THERE IS NO CLEAR EVIDENCE LINKING DIETARY LEVELS OF MSG TO UNPLEASANT SYMPTOMS

